M/035/011

Kennecott Utah Copper Corporation
8315 West 3595 South
P.O. Box 6001
Magna, Utah 84044-6001
(801) 252-3000

Kennecott

March 31, 1998

Ms. Mary Ann Wright,
Associate Director of Mining
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

RE: Notice of Intention to Revise Mining Operations and Surety Bond Estimate for the Second Tailings Pipeline

Dear Ms. Wright:

Attached is the Notice of Intention to Revise Mining Operations for permit number M/035/011 and surety bond estimates for the second tailings pipeline. These attachments are submitted in response to your letter dated February 9, 1998. The estimated cost to demolish and remove the second tailings pipeline is $2,072,000. Kennecott Utah Copper Corporation still believes that the pipeline will have a post-mining use, and anticipates that the surety bond will be discontinued when contracts are in place with a second party to use and maintain the pipeline.

If you have any questions or comments please call me at 252-3257.

Sincerely,

Paula Doughty

Paula H. Doughty
Manager, Environmental Compliance

Attachment

PHD:RB:lr

FORM MR-REV
(Revised 6/96)

FOR DOGM USE ONLY:
File #: (M/S) 035 / 011 - ( )
Approved: (mm/dd/yy) ____/____/____
Bond Adjustment: ($) _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
Telephone: (801) 538-5291 Fax: (801) 359-3940

NOTICE OF INTENTION TO REVISE MINING OPERATIONS

When an operator intends to revise a mining operation, a **Notice of Intention to Revise Mining Operations** shall be filed with the Division. The notice must include all information, concerning the revision, that would have been required if it had been included in the original Notice of Intention (NOI). Ideally, the revision application should be a "stand-alone" document and include all information necessary to conduct a complete review.

"**REVISION**" means a **significant change** to the approved Notice of Intention to Conduct Mining Operations, which will increase the amount of land affected or alter the location and type of onsite surface facilities such that the nature of the reclamation plan will differ substantially from the approved Notice of Intention. Revisions require public notice and may require approval by the Board of Oil, Gas & Mining, if a change to the amount and/or form of the reclamation surety is necessary.

"**AMENDMENT**" is an **insignificant change** to the approved Notice of Intention. An amendment requires Division approval, but does not require public notice.

The Division will determine whether a request for change is significant or insignificant on an individual case-by-case basis.

PLEASE NOTE: When applicable, reference to previously approved information contained in the original NOI can be used (identify volume #'s, section, page #, plate/map #'s, & date of submittal). If possible, please attach appropriate copies of the referenced material as part of the application for revision.

Where possible, please format the application to revise mining operations (e.g., text, maps, tables, figures, etc.) to allow direct insertion into the original NOI as replacement pages, or as a separate addendum to the approved NOI.

The operator is encouraged to use this form as a guide only. Please use extra sheets as necessary to complete each section that follows.

The following information must be included as part of the application to revise mining operations:

I. GENERAL INFORMATION (Rule R647-4-104)

1. Name of Operator/Applicant: Kennecott Utah Copper Corporation

2. Name of Company/Corporation: Kennecott Utah Copper Corporation

3. Address: PO Box 6001, Magna, UT 84044-6001

4. Phone: (801) 252-3257

5. Name of Mine/Project: Copperton Concentrator/Second Tailings Pipeline

6. Previously Assigned File Number: (M / S) / 035 / 011
*from original Notice of Intention (NOI)

7. Location of Proposed Activities:

COUNTY Salt Lake

TOWNSHIP ____ ____, RANGE ____ ____, (See Attachment)

SECTION(S) See Attachment (Identify to 1/4, 1/4 section)

8. Ownership of Land Surface:

Private (Fee) ___ Owners Name(s): Kennecott Utah Copper Corporation

(Private)

State of Utah ____ Public Domain (BLM) ____ National Forest (USFS) ____

9. Ownership of Minerals:

Private (Fee) ___ Owners Names(s): Kennecott Utah Copper Corporation

(Private)

State of Utah _____ Public Domain (BLM) _____ National Forest (USFS) _____

10. Utah Mining Claim Number(s) NA

11. Utah State Lease Numbers(s) NA

II. MAPS, DRAWINGS & PHOTOGRAPHS (Rule R647-4-105)

Appropriate maps, drawings, plates, etc. should be provided that are pertinent to the revision, or amendment of mining operations. Please provide a revised map outlining the previously approved and the new proposed disturbed area boundaries. These materials should be prepared according to the requirements of Rule R647-4-105.

List map numbers or appendices used for this section: 14 Maps are attached (410-C-0260 to 410-C-0274)

III. OPERATION PLAN (Rule R647-4-106)

Provide a narrative description, referencing any appropriate attached maps or drawings, of the pertinent details of the proposed change(s) in the operating plan. Specific details which are different from those described in the original approved NOI should be included. Identify additional proposed surface disturbance. Include the total number of acres to be affected by the revision or amendment. All appropriate information requirements as outlined under Rule R647-4-106 must be addressed in the application.

See Attachment

IV. IMPACT ASSESSMENT (Rule R647-4-109)

Please provide information as required under Rule R647-4-109 regarding projected potential surface and/or subsurface impacts which may be associated with the proposed change(s) in mining operations.

See Attachment

V. RECLAMATION PLAN (Rule R647-4-110)

Describe how you intend to stabilize the disturbed areas upon cessation of operations. This includes backfilling excavations, grading, sloping or contouring, permanent stabilization of slopes or roads, permanent closure of roads, removal of structures and improvements, etc. Provide cross section of the proposed final contour of the land after reclamation.

Please outline any proposed changes to the originally approved reclamation plan. Appropriate sections of Rule R647-4-110 must be addressed as they may apply to the proposed change(s) in mining operations.

See Attachment

VI. VARIANCE (Rule R647-4-112)

Please identify any requests for variance from the requirements of rules R647-4-107, -108, or -111. A narrative justification must also be included for each variance request. A discussion of any alternate methods or other mitigating measures should be included, if applicable.

There are no new variance requests as part of the Second Tailings Pipeline NOI.

VII. SURETY (Rule 647-4-113)

Reclamation Surety:

Indicate whether the proposed activities will change the amount of work required to reclaim the minesite. If significant changes will result, then an itemized reclamation cost estimate should be provided (and attached) with direct reference to the specifics of the proposed change(s). This information will be used to assist the Division in determining any reclamation surety adjustments required for the operation.

Reclamation of the Second Tailings Pipeline will change the amount of work required to reclaim the site. Details of the surety estimate are listed in attachment.

VIII. SIGNATURE REQUIREMENT

The application for permit change must include a section similar to the following example:

I hereby certify that the foregoing is true and correct.

Paula Doughty
Signature of Authorized Officer/Representative:

Paula Doughty
Name (Typed or Print):

Manager, Environmental Compliance
Title of Authorized Officer/Representative:

Date: March 31, 1998

ATTACHMENT

FOR

NOTICE OF INTENTION TO AMEND MINING OPERATIONS

PERMIT NUMBER M/035/011

KENNECOTT UTAH COPPER CORPORATION

SECOND TAILINGS PIPELINE

SUBMITTED TO

UTAH DIVISION OF OIL, GAS AND MINING

MARCH 31, 1998

INTRODUCTION

Kennecott Utah Copper Corporation completed the construction of a second tailings pipeline in December, 1996. The second pipeline was constructed as a redundant system for the existing pipeline to ensure pipeline availability during upset conditions and to allow one line to be taken out of service for maintenance when required. The pipeline will also allow greater flexibility in the management of water following the cessation of mining operations.

The second pipeline was built in a corridor that was already occupied by three pipelines. These are the first tailings pipeline, the return water line and the copper concentrate line. Descriptions of these facilities can be found in the original 1986 UCD Modernization Project Mining and Reclamation Plan Amendment. A formal variance was granted with the final approval of the project on August 28, 1986 which waived surety for the pipelines and associated access roads. The variance was granted because the pipelines will be used for water management following mine closure. However, the Division of Oil, Gas and Mining has requested that the second tailings pipeline be bonded.

This attachment to the notice of intention provides a description of the new tailings pipeline, details reclamation and closure strategies and provides surety bond estimates.

FACILITY DESCRIPTION

The second tailings pipeline was constructed between the existing Copperton Concentrator and the existing tailings splitter box located above the Magna Power Plant. It is located entirely within the boundaries of permit number M/035/011. The pipeline extends for approximately 66,000 feet through Section 5, T3S, R2W; Sections 6, 7, 8, 16, 17, 21, 28, 29 and 32, T2S, R2W; and Section 31, T1S, R2W. Fourteen maps are attached showing the pipeline in plan and profile view. Drawing number 410-C-0260 shows the entire pipeline corridor at a scale of one inch equals 2000 feet. Drawing numbers 410-C-0262 to 410-C-0274 show individual segments of the pipeline corridor at a scale of one inch equals 200 feet.

The second tailings pipeline was constructed about 30 feet west of center from the existing pipeline. The entire pipeline corridor was widened by about 50 feet to contain the second pipeline and a new access road on its west side. As described in the next section, all areas impacted by construction activities have been reclaimed except for the pipeline itself and the access road.

The pipeline runs above ground for approximately 56,000 feet and below ground for 10,000 feet across the Aliant Tech property. The pipeline crosses two trestles totaling 900 feet in length immediately north of the Copperton Concentrator. It begins at an elevation of 5443 feet and ends at 4724 feet above mean sea level. It maintains a grade of 0.7 to 0.8 percent throughout its length. There are also fourteen drop boxes along the pipeline with elevation drops of between six and 21 feet. About half of the elevation loss on the pipeline is due to the gentle pipeline grade and half due to the drop boxes.

The new tailings pipeline is a sixty inch diameter reinforced concrete pipe that complies with AWWA standards for a Wall C, Class III design (approximately six inches in diameter). To improve abrasion resistance, the thickness of the bottom of the pipeline was increased by six inches. Vents are located about every 1000 feet on the pipeline. Where the pipeline crosses a trestle or enters or exits a drop box, it is constructed of sixty inch diameter rubber lined steel pipe. The drop boxes are constructed with three feet thick concrete walls. To minimize wear, water entering the drop boxes hits an impact pool rather than the concrete sides.

RECLAMATION PLAN AND SURETY BOND ESTIMATE

It is anticipated that the second tailings pipeline will have a post-Mining use as a water conveyance and management system that provides clean water to users in the Salt Lake Valley, and transports lower quality water to the north for evaporation or discharge. However, the following reclamation plans and surety bond estimates are required until such time as contracts are in place with a second party to maintain and manage the pipelines.

Reclamation activities went on concurrently with construction of the second tailings pipeline. Previously existing steep cut banks were reduced to slopes of three to one. In 1996 and 1997, a total of 340 acres along the pipeline corridor were recontoured and had topsoil added. A total of 545 acres along the pipeline corridor were revegetated with a mix of native grasses, wildflowers, legumes and herbaceous plants.

If the second tailings pipeline does need to be removed it will be demolished in place using backhoes with hydraulic rock breakers. The steel debris will be salvaged and the concrete debris will be hauled to the foot of the Bingham Canyon Waste Rock Dump. Once all of the concrete debris is in place the disposal site will be covered with waste rock. This strategy will minimize the haul distance for the debris, will preserve space in other landfills in the area, and will help neutralize potential acid rock drainage from the overlying waste rock. The entire disposal site will also be up gradient from the existing Bingham Cutoff wall and groundwater collection system.

The estimated total cost for demolition and removal of the pipeline is $2,072,000. The direct costs for labor and equipment are $1,495,000, and the burden fees, overhead costs and ten percent contingency add $577,000. The cost estimate is detailed in Table 1. Costs for revegetation of the pipeline corridor are not included because the three preexisting pipelines will be left in place after closure.

TABLE 1 - SECOND TAILINGS PIPELINE

BONDING CALCULATIONS

Kennecott Utah Copper
L..gineering Estimation Program
Single Estimate Report

Estimate No: 135 **Version: 1** **Job: TAILING PIPELINE RECLAMATI** **Rate Structure: Normal**

Estimate Comments

Coins Job Number:
User ID: KCMASSON
Estimate Start Date: 3/31/98
Total Estimate Cost: $ 1,494,944

Coins Phase Number:
Coins Phase Description:
Project Start Date:
Grand Total Estimate Cost: $ 2,071,992

Hours/Shift: 10 **Shifts/Day: 1** **Days/Week: 5**

$188,363

Task	Description	Quantity	Units	Unit Cost	Total Cost
10	REMOVE PIPE AND HAUL	66,000	Ft	$15.56	$1,027,023
	Equipment: $652,965.60				
	Labor: $374,056.93				

This task is to remove the pipe and haul it to the toe of the Bingham Canyon dump. The crushed pipe will be covered with waste rock.

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
10	CRUSH PIPE	56,000	Ft	$9.63	132	$539,326
	Equipment: $319,215.60					
	Labor: $220,110.00					

Detail	Description	Quantity	Units	Unit Cost	Units	Total Cost
10	CAT 225 BACKHOE W/HYDRAUL	1.0	Each	$3.64	Ft	$203,777
	Equipment: $168,960.00					
	Labor: $34,817.20					
20	WATER TRUCK	1.0	Each	$1.40	Ft	$78,399
	Equipment: $49,935.60					
	Labor: $28,463.60					
30	CAT 14G PATROL	1.0	Each	$1.89	Ft	$106,097
	Equipment: $71,280.00					
	Labor: $34,817.20					
40	PROJECT SUPERVISOR	1.0	Each	$0.83	Ft	$46,200
	Labor: $46,200.00					
50	LABORER	2.0	Each	$0.83	Ft	$46,552
	Labor: $46,552.00					
60	SAFETY ENGINEER	1.0	Each	$0.52	Ft	$29,260
	Labor: $29,260.00					
70	4 x 4 PICKUP TRUCK	2.0	Each	$0.52	Ft	$29,040
	Equipment: $29,040.00					

Estimate No: 135 Version: 1 Job: TAILING PIPELINE RECLAMATI Rate Structure: Normal

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
20	LOAD PIPE	56,000	Ft	$2.34	132	$130,847
	Equipment: $96,030.00					
	Labor: $34,817.20					

Detail	Description	Quantity	Units	Unit Cost	Units	Total Cost
10	CAT 980C LOADER	1.0	Each	$2.34	Ft	$130,847
	Equipment: $96,030.00					
	Labor: $34,817.20					

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
30	HAUL PIPE	56,000	Ft	$5.71	132	$319,774
	Equipment: $205,920.00					
	Labor: $113,854.40					

THESE ITEMS ARE FOR THE 56000 LF OF ABOVE GROUND PIPE ONLY.

Detail	Description	Quantity	Units	Unit Cost	Units	Total Cost
10	DUMP TRUCK, 17 TON PAYLOA	4.0	Each	$5.71	Ft	$319,774
	Equipment: $205,920.00					
	Labor: $113,854.40					

HAUL CYCLE ANALYSIS:

LOAD 8 MIN
HAUL 35 MIN
UNLOAD 5 MIN
RETURN 30 MIN

TOTAL 73 MIN PER ROUND SAY 75 MIN

FIGURE 15 LF OF PIPE PER TRUCK LOAD. WITH 425 LF PER DAY NEED 28 LOADS PER DAY. FIGURE TO USE 4 TRUCKS

Estimate No: 135 Version: 1 Job: TAILING PIPELINE RECLAMATI Rate Structure: Normal

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
40	BURY PIPE AT TOE OF DUMP	56,000	Ft	$0.66	20	$37,075
	Equipment: $31,800.00					
	Labor: $5,275.33					

Detail	Description		Quantity	Units	Unit Cost	Units	Total Cost
10	CAT D10L DOZER		1.0	Each	$0.66	Ft	$37,075
	Equipment:	$31,800.00					
	Labor:	$5,275.33					

Task	Description	Quantity	Units	Unit Cost	Total Cost
20	DEMO DROP STRUCTURES	15	Each	$27,552.22	$413,283
	Equipment: $317,100.00				
	Labor: $96,183.25				

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
10	DEMO CONCRETE STRUCTURE	15	Each	$15,437.67	75	$231,565
	Equipment: $192,000.00					
	Labor: $39,565.00					
	Figure 5 days for two hydrolic rock breakers for each drop structure					

Detail	Description		Quantity	Units	Unit Cost	Units	Total Cost
10	CAT 225 BACKHOE W/HYDRAUL		2.0	Each	$15,437.67	Each	$231,565
	Equipment:	$192,000.00					
	Labor:	$39,565.00					

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
20	HAUL CONCRETE TO BINGHAM	15	Each	$12,114.55	45	$181,718
	Equipment: $125,100.00					
	Labor: $56,618.25					

Detail	Description		Quantity	Units	Unit Cost	Units	Total Cost
10	CAT 988B LOADER		1.0	Each	$3,641.30	Each	$54,620
	Equipment:	$42,750.00					
	Labor:	$11,869.50					
20	DUMP TRUCK, 17 TON PAYLOA		4.0	Each	$7,267.60	Each	$109,014
	Equipment:	$70,200.00					
	Labor:	$38,814.00					
30	CAT 14G PATROL		0.5	Each	$1,205.65	Each	$18,085

Estimate No: 135 Version: 1 Job: TAILING PIPELINE RECLAMATI Rate Structure: Normal

Equipment: $12,150.00
Labor: $5,934.75

Task	Description	Quantity	Units	Unit Cost	Total Cost
30	DEMO TRESSELS	3	Each	$18,212.67	$54,638
	Equipment: $36,277.50				
	Labor: $18,360.50				

Item	Description	Quantity	Units	Unit Cost	Duration	Total Cost
10	DEMO TRESTLE	1,060	Ft	$51.55	15	$54,638
	Equipment: $36,277.50					
	Labor: $18,360.50					

THERE ARE TWO TRESTLES ON THE PIPE LINE CORRIDOR.
PLAN TO HAVE ATLAS STEEL SALVAGE THE STEEL AFTER THE PIPE IS REMOVED FROM THE STRUCTURE

Detail	Description	Quantity	Units	Unit Cost	Units	Total Cost
10	40-TON CRANE	2.0	Each	$25.91	Ft	$27,469
	Equipment: $21,000.00					
	Labor: $6,469.00					
20	CAT D9H DOZER	1.0	Each	$18.15	Ft	$19,234
	Equipment: $15,277.50					
	Labor: $3,956.50					
30	LABORER	3.0	Each	$7.49	Ft	$7,935
	Labor: $7,935.00					